

AMENDMENTS TO THE CLAIMS

Claims 1-59 (Canceled)

60. (Currently Amended) A ceramic infrared sensor having a lens body, which is comprised of a ceramic part and a resin layer that covers at least the light receiving surface of the ceramic part, a supporting part, which supports said lens body, and a detection part, which detects the light that has been transmitted through said lens body,

wherein a pigment that shields visible light is contained in the resin layer of said lens body, and a light-shielding ratio of the lens body, T_i/T_v , is greater than the product of the light-shielding ratio of the ceramic part and that of the resin layer, and

T_i is the linear transmittance of light of 8 to 12 μm wavelength and T_v is the linear transmittance of 830 nm laser beam.

61. (Previously Presented) The ceramic infrared sensor according to claim 60, wherein the pigment is carbon black, graphite, diamond, titanium black, an iron oxide, molybdenum, tungsten, iron, nickel, cobalt, copper, silver, compounds thereof, TiO_2 , BN, AlN, ZnO, ZnS, or mixtures thereof.

62. (Previously Presented) A ceramic infrared sensor having a lens body, which is comprised of a ceramic part and a resin layer that covers at least the light receiving surface of the ceramic part, a supporting part, which supports said lens body, and detection part, which detects the light that has been transmitted through said lens body,

wherein a pigment that shields visible light is contained in the ceramic part and the resin layer of said lens body, and a light-shielding ratio of the lens body, T_i/T_v , is greater than the product of the light-shielding ratio of the ceramic part and that of the resin layer; and

T_i is the linear transmittance of light of 8 to 12 μm wavelength and T_v is the linear transmittance of 830 nm laser beam.

63. (Previously Presented) The ceramic infrared sensor according to claim 62, wherein the pigment is carbon black, graphite, diamond, titanium black, and iron oxide, molybdenum, tungsten, iron, nickel, cobalt, copper, silver, compounds thereof, TiO_2 , BN, AlN, ZnO, ZnS, or mixtures thereof.

64. (Previously Presented) A ceramic infrared sensor as set forth in claim 99, wherein the pigment in the lens body is in a range of 0.001 to 1 mass%.

65. (Previously Presented) A ceramic infrared sensor as set forth in claim 61 or 63; wherein the pigment in the lens body is in a range of 0.001 to 2 mass%.

66. (Previously Presented) A ceramic infrared sensor as set forth in any one of claims 60, 62, 99, 100, 101 or 102, wherein the linear transmittance of light of 8 to 12 μm in wavelength of said lens body is 50% or more.

67. (Previously Presented) A ceramic infrared sensor as set forth in claim 66, wherein the main component of said ceramic is zinc sulfide (ZnS).

68. (Previously Presented) A ceramic infrared sensor as set forth in any one of claims 60, 62, 99, 100, 101 or 102, wherein the linear transmittance of light of 3 to 5 μm wavelength of said lens body is 50% or more.

69. (Previously Presented) A ceramic infrared sensor as set forth in claim 68, wherein the main component of said ceramic is spinel (MgAl_2O_4).

70. (Previously Presented) A ceramic infrared sensor as set forth in any one of claims 99, 100, 101 or 102, wherein said supporting part is comprised of resin.

71. (Previously Presented) A ceramic infrared sensor as set forth in claim 70, wherein said supporting part is made integral with said resin.

72. (Previously Presented) A ceramic infrared sensor as set forth in claim 71, wherein the main component of said resin is polyethylene.

73. (Previously Presented) A ceramic infrared sensor as set forth in claim 72 or 103, wherein said polyethylene is high density polyethylene.

74. (Previously Presented) A ceramic infrared sensor as set forth in claim 60 or 62, wherein said supporting part is comprised of resin.

75. (Previously Presented) A ceramic infrared sensor as set forth in claim 74, wherein said supporting part is made integral with said resin layer that covers at least the light receiving surface of the ceramic part.

76. (Previously Presented) A ceramic infrared sensor as set forth in claim 75, wherein the main component of said resin is polyethylene.

77. (Previously Presented) A ceramic infrared sensor as set forth in claim 76 or 104, wherein said polyethylene is high density polyethylene.

78. (Previously Presented) A ceramic infrared sensor as set forth in any one of claims 60, 62, 99, 100, 101 or 102, wherein said supporting part is comprised of metal.

79. (Previously Presented) A ceramic infrared sensor as set forth in any one of claims 99, 100, 101 or 102, wherein said supporting part includes a cylindrical part, which is formed between the portion of said lens body that transmits light and said detection part.

80. (Previously Presented) A ceramic infrared sensor as set forth in claim 79, wherein said cylindrical part is comprised of resin.

81. (Previously Presented) A ceramic infrared sensor as set forth in claim 80, wherein the main component of said resin is polyethylene.

82. (Previously Presented) A ceramic infrared sensor as set forth in claim 60 or 62, wherein said supporting part includes a cylindrical part, which is formed between the portion of said lens body that transmits light and said detection part.

83. (Previously Presented) A ceramic infrared sensor as set forth in claim 82, wherein said cylindrical part is comprised of resin.

84. (Previously Presented) A ceramic infrared sensor as set forth in claim 83, wherein said cylindrical part is made integral with said supporting part and said resin layer.

85. (Previously Presented) A ceramic infrared sensor as set forth in claim 84, wherein the main component of said resin is polyethylene.

86. (Previously Presented) A ceramic infrared sensor as set forth in claim 85, wherein said polyethylene is high density polyethylene.

87. (Previously Presented) A ceramic infrared sensor as set forth in any one of claims 99, 100, 101 or 102, wherein the average particle diameter of said pigment in the lens body is in a range of 0.01 to 2 μm .

88. (Previously Presented) A ceramic infrared sensor as set forth in any one of claims 99, 100, 101 or 102, wherein the degree of dispersion R of said pigment in the lens body is less than or equal to 10%.

89. (Previously Presented) A ceramic infrared sensor as set forth in any one of claims 99, 100, 101 or 102, wherein the value of the ratio T_i/T_v of the lens body is greater than or equal to 5.

90. (Previously Presented) A ceramic infrared sensor as set forth in any one of claims 99, 100, 101 or 102, wherein the value of the ratio T_i/T_v of the lens body is greater than or equal to 150.

91. (Previously Presented) A ceramic infrared sensor as set forth in claim 90, wherein the infrared light transmittance T_i of the lens body is greater than or equal to 40%.

92. (Previously Presented) A ceramic infrared sensor as set forth in claim 91, wherein the degree of dispersion R of said pigment in the lens body is less than or equal to 10%.

93. (Previously Presented) A ceramic infrared sensor as set forth in claim 60 or 62, wherein the average particle diameter of said pigment in the lens body is in a range of 0.01 to 2 μm .

94. (Previously Presented) A ceramic infrared sensor as set forth in claim 60 or 62, wherein a total added amount of said pigment in the ceramic part and/or resin layer is in a range of 0.05 to 2wt%.

95. (Previously Presented) A ceramic infrared sensor as set forth in claim 94, wherein a ratio of added amount of said pigment B/A in the resin layer is in a range of 0.1 to 15.

96. (Previously Presented) A ceramic infrared sensor as set forth in claim 60 or 62, wherein the value of the ratio T_i/T_v of the lens body is greater than or equal to 15.

97. (Previously Presented) A ceramic infrared sensor as set forth in claim 60 or 62, wherein the value of the ratio T_i/T_v of the lens body is greater than or equal to 150.

98. (Previously Presented) A ceramic infrared sensor as set forth in claim 97, wherein the infrared light transmittance T_i of the lens body is greater than or equal to 40%.

99. (Previously Presented) A ceramic infrared sensor, having a lens body, comprising ceramic, a supporting part, which supports said lens body, and a detection part, which detects the light that has been transmitted through said lens body, wherein a pigment that shields visible light is contained in said lens body, wherein

the pigment is graphite, titanium black, an iron oxide, molybdenum, tungsten, iron, nickel, cobalt, copper, silver, compounds thereof, TiO_2 , BN, AlN, ZnO, ZnS, or mixtures thereof.

100. (Previously Presented) A ceramic infrared sensor, having a lens body, comprising ceramic, a supporting part, which supports said lens body, and a detection part, which detects the light that has been transmitted through said lens body, wherein a pigment that shields visible light is contained in said lens body, wherein

the pigment is carbon black in a range of 0.001 mass% to 0.01 mass%, graphite, titanium black, an iron oxide, molybdenum, tungsten, iron, nickel, cobalt, copper, silver, compounds thereof, TiO_2 , BN, AlN, ZnO, ZnS, or mixtures thereof.

101. (Previously Presented) A ceramic infrared sensor, having a lens body, comprising ceramic, a supporting part, which supports said lens body, and a detection part, which detects the light that has been transmitted through said lens body, wherein a pigment that shields visible light is contained in said lens body, wherein

the pigment is diamond in a range of 0.001 mass% to 1 mass%, graphite, titanium black, an iron oxide, molybdenum, tungsten, iron, nickel, cobalt, copper, silver, compounds thereof, TiO_2 , BN, AlN, ZnO, ZnS, or mixtures thereof.

102. (Previously Presented) A ceramic infrared sensor, having a lens body, comprising ceramic, a supporting part, which supports said lens body, and a detection part, which detects the light that has been transmitted through said lens body, wherein a pigment that shields visible light is contained in said lens body, wherein

the pigment is carbon black in a range of 0.001 mass% to 0.01 mass%, diamond in a range of 0.001 mass% to 1 mass%, graphite, titanium black, an iron oxide, molybdenum, tungsten, iron, nickel, cobalt, copper, silver, compounds thereof, TiO_2 , BN, AlN, ZnO, ZnS, or mixtures thereof.

103. (Previously Presented) A ceramic infrared sensor as set forth in claim 70, wherein the main component of said resin is polyethylene.

104. (Previously Presented) A ceramic infrared sensor as set forth in claim 74, wherein the main component of said resin is polyethylene.